Lessons From the Practice

Stedman's

KATHLEEN BELL UNGER, MD
San Francisco, California

I REMEMBER the very first time that my old friend failed me, sometime in the late 1970s. The word was **nanogram**. I could not find it in my medical dictionary. It was inconceivable that it was not there. I rationalized away the failure of my *Stedman's Medical Dictionary.*

A few years went by, during which the dictionary appeared to function perfectly. Then it failed me again, on **dopamine**, and on **monoclonal antibody**. Giving false reassurance, it worked fine again—for a while—putting my fears to rest . . . well, almost to rest. I found myself writing little notes to myself, reminders to look up certain words, the next time that I was at the hospital medical library.

Some more time went by. Then, **alexithymia** happened, and **recurrence risk**. They started coming thick and fast now. My denial first showed cracks, then rapidly crumbled. I would have to get a new version of *Stedman's.*

I can clearly remember that September day back in 1965, when my freshman medical student self bought that first volume. It was by far the most expensive book I had ever purchased. If I had been asked about it, I would have said that it would serve me well, forever. After all, what was there new in medical terminology that could possibly be added? There had been nothing new added to *Gray's Anatomy*, had there? No new muscles or nerves or organs discovered, right? The concept of medical terminology as a living, growing thing had not yet occurred to me. After all, it was all based on Greek and Latin, wasn't it?

A few months ago, looking through a medical book catalogue, I noticed that they were offering a 25th edition of *Stedman's.* I became curious to see what edition my old one was and was shocked to see that it was the 20th. I wondered, uneasily, how the editors could have had enough new words to put out five more editions over a span of only 25 years. It was bittersweet to realize that a quarter of a century had gone by since that freshman year in medical school. A whole new generation of physicians had grown up. There really were new terms, new diseases. I had better become current posthaste.

When my new *Stedman's* arrived, it sat there, pristine in its unopened cellophane wrapper, for at least a month while I eyed it suspiciously. It was appreciably thinner than my old one, which I found alarming. (It was also an inch wider, which I failed to notice.) Then, **leu-enkephalin** came along, and I had to plunge in.

It proved to be an experience of pure pleasure. As I turned page after page, I felt as though I were reexperiencing a favorite childhood pastime, one of cruising through the pages of an encyclopedia, reading whatever caught my eye.

And there were so many things that caught my eye. Those meticulously etched drawings of anatomic structures were almost all gone. The type was darker, the page was whiter. Depictions of fetuses with rarely encountered congenital anomalies no longer graced its pages.

Other things were all there, every single new term—along with abbreviations, proper names, even federal facilities like the **Centers for Disease Control**. It was so complete that I was a little surprised to note that they did not include the CDC's phone number.

I am now at peace with the reality of medical dictionaries getting "degenerative arthritis," much like people do, and not merely of the "spine." Fortunately, this is a reversible disorder, at least in dictionaries.

My new *Stedman's* sits on my desk at home, where it is the most handy. I use it frequently, sometimes just for the fun of it. It continues to supply new knowledge, as well as to clarify formerly fuzzy concepts.

My old *Stedman's* sits in a place of honor, on a wall of bookshelves in our study. It is placed right next to my father's copy of *Gray's Anatomy* (23rd edition, 1936), which he passed on to me when I started medical school.

The following are taken from *Stedman's Medical Dictionary*, 25th edition, published in 1990:

alexithymia In psychopathology, a symptom describing difficulty in recognizing and defining one's emotions, defining them in terms of somatic sensations or behavioral reactions.

Centers for Disease Control (CDC) The federal facility for disease eradication, epidemiology and education headquartered in Atlanta, Georgia. It encompasses the Center for Infectious Diseases, Center for Environmental Health, Center for Health Promotion and Education, Center for Prevention Services, Center for Professional Development and Training, and Center for Occupational Safety and Health. Formerly named the Center for Disease Control (1970) and the Communicable Disease Center (1946). [The CDC's phone number is 404-639-3291.]

dopamine 3-Hydroxytyramine; decarboxylated dopa; in neurophysiology, an intermediate in tyrosine metabolism and precursor of norepinephrine and epinephrine in the central nervous system; its presence in the central nervous system and localization in the basal ganglia (caudate and lentiform nuclei) suggest that dopamine may have other functions.

leu-enkephalin In neurophysiology, one of the pentapeptide endorphins (opioid peptides), found in many parts of the brain, that bind to specific receptor sites, some of which may be pain-related opiate receptors; hypothesized as endogenous neurotransmitters and nonaddicting analgesics.

monoclonal antibody In immunochemistry, pertaining to an immune or protective protein from a single clone (colony of cells derived from a single cell by asexual reproduction) or genetically homogeneous population of hybrid cells, all molecules of which are the same. Hybrid cells are cloned to establish cell lines producing a specific monoclonal antibody.

nanogram A unit of weight measure used in SI units (Système International d'Unités) and in the metric system to signify one billionth of a gram (10^{-9}).

recurrence risk In genetics, meaning risk that a disease

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From the Department of Psychiatry, University of California, San Francisco, School of Medicine, San Francisco.

Reprint requests to Kathleen Bell Unger, MD, 2000 Van Ness Ave, Suite 710-711, San Francisco, CA 94109.

will occur elsewhere in a pedigree, given that at least one member of the pedigree, the proband, exhibits the disease.

GENERAL REFERENCES

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Stedman's Medical Dictionary, 20th Edition, Baltimore, Md, Williams & Wilkins, 1961

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Denying the Inevitable— The Misplaced Use of Technology

WILLIAM E. WATTS, MD
Seattle, Washington

DAVID T. WATTS, MD
Madison, Wisconsin

VAN WAS AN 88-year-old retired engineer who had been failing for months and, to some extent, for years. He was becoming progressively demented from multiple cerebral infarctions. Unfortunately, there was no treatable or reversible cause of his deterioration. He was widowed and had no children, so a niece was responsible for decisions and arrangements for his personal needs and medical care.

His internist, who had been Van's primary physician for many years, had a conference with the niece. Van's prognosis was discussed. The presence of significant multi-system disease and progressive neurologic decline meant that further decline and death were highly likely. The niece, however, was dissatisfied with this outlook. The internist was dismissed, and Van's care was transferred to a tertiary medical center. This center was a teaching institution of premier caliber with a full range of staff and equipment: subspecialists in nearly every conceivable discipline with access to a dazzling array of technological devices. An institution's preeminence in specialty expertise also can be its peril: a frail elderly patient risks becoming dehumanized, a set of diseases instead of a person. Controlling symptoms and providing palliation and comfort do not belong to any one specialty. (This reference to tertiary care centers is generic and is in no way intended to be disrespectful of the fine center where Van spent much of his last year. Nor is excessive medical meddling seen only in tertiary centers. Some physicians treat as long as there is a heartbeat, regardless of a patient's overall prognosis and quality of life.)

When first seen at the medical center, Van could no longer take care of himself, required aid in dressing and bathing, was falling repeatedly, asked the same questions again and again, was disoriented, frequently incontinent, and had lost 30 pounds. He did not know the date, the day of the week, or the name of the President. There is no evidence at any time during his last year of treatment at the center that he improved in any of these abilities. Instead, much of the time he was worse despite—or because of—all the invasions of medical technology.

During his last year he had three computed tomographic studies of his head, an electroencephalogram, a bone scan, a spinal tap, four chest x-ray films, two abdominal x-ray films, a renal ultrasound, an intravenous pyelogram, a retrograde pyelogram, many blood drawings with counts and chemistries, numerous urinalyses, blood and urine cultures, hair tested for arsenic, serum toxicology and heavy metal screens, urine toxicology.

He was in the hospital three times, for a total of 38 days. He was seen in consultation by neurologists, gastroenterologists, anesthesiologists, and urologists. He had a prostate resection. He was examined by many residents, along with countless assessments by dieticians, physical therapists, speech therapists, occupational therapists, and nurse specialists.

He had nasogastric tube feeding and indwelling catheters for months. Various forms of restraints were applied, including Posey, chest, and wrist restraints, body restraints, and hand and foot restraints. Why? Because he pulled out his IV lines and nasogastric tubes. He was given many parenteral solutions, three units of packed red cells, and one unit of whole blood.

At one point, a percutaneous gastrostomy was ordered, but his niece would not give her permission. She was becoming disenchanted with the lack of apparent benefits and the distressing nature of the treatments Van was receiving. She wanted his nasogastric tube removed and her uncle released from the hospital. Under pressure from the attending physician and an Ethics Committee representative, the niece relented. Later an order was written, "Please consult Dr B and Dr W (neurologist and physiatrist): Has this patient an incurable or irreversible condition? Please advise on continuation of nutritional support with respect to ultimate prognosis." Six months before this, the neurologist had written, "I believe his current situation offers no reasonable prospect of recovery."

After a 17-day hospital stay, Van was discharged with a nasogastric tube. Later he could be fed by mouth, but 24-hour nursing care was required. Shortly after his 89th birthday he was reported to be "remarkably better." In fact, he was so much better he was able to die a few weeks later. After nearly a year of modern medical care. Finally!

There are lessons to be learned from Van's terminal year. While modern medical centers can offer dramatic and amazing cures, these are less forthcoming to the chronically ill, debilitated, and demented. The interests of frail elderly persons are often better served by a humanitarian approach that recognizes the limitations of technology.

The niece's expectation of dramatic success led her to seek care at the tertiary center. But with that change there was a loss of perspective that can only be developed in a close personal relationship of many years. Thus, Van entered a system that knew little of who he was—a proud, independent, retired engineer.

To the system he was alternatively a diagnostic or therapeutic challenge, or a placement problem. Diagnostic testing searched for the crucial lesion (such as obstructing hydrocephalus, or arsenic poisoning) which would lead to a dramatic cure. The structure of the academic setting often obscured primary responsibility to the patient by involving multiple layers of housestaff and attending staff. *Continuity*

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From the Department of Medicine, University of Washington, Seattle (Dr W. E. Watts) and the Section of Geriatrics and Gerontology, Department of Medicine, University of Wisconsin, Madison (Dr D. T. Watts).

Reprint requests to David T. Watts, MD, Department of Medicine, J5/2, Clinical Science Center, 600 Highland Ave, Madison, WI 53792.